

LA-UR-20-24666

Approved for public release; distribution is unlimited.

Title: Witnessing Trinity The test's success was met with surprise,
relief, fear

Author(s): Steeves, Brye Ann

Intended for: Web

Issued: 2020-06-26

Disclaimer:

Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by Triad National Security, LLC for the National Nuclear Security Administration of U.S. Department of Energy under contract 89233218CNA000001. By approving this article, the publisher recognizes that the U.S. Government retains nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

Witnessing Trinity

The test's success was met with surprise, relief, fear

By [National Security Research Center](#) staff

They witnessed the moment the world changed forever.

A few hundred scientists, engineers and soldiers gathered in the New Mexico desert during the early morning hours of July 16, 1945. It was the culmination of years of work at a secret lab in Los Alamos led by J. Robert Oppenheimer.

“Three, two, one,” counted down physicist Samuel Allison, “now!”

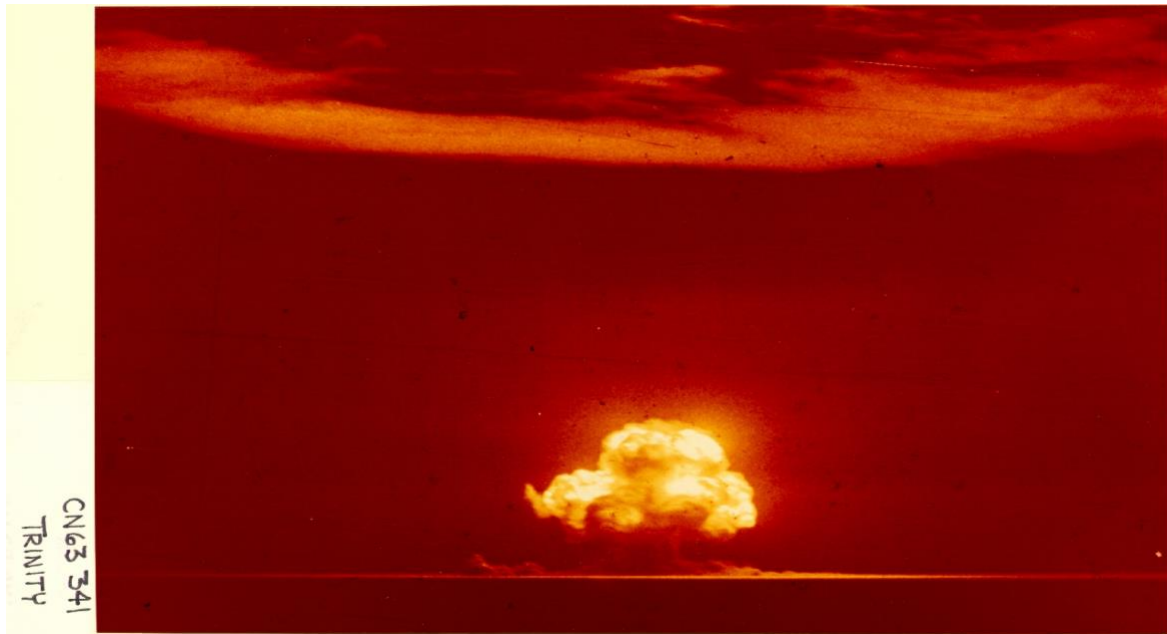
At first, there was silence. Then, ranging from vividly descriptive to deeply profound to even a little comical, those who witnessed the Trinity Test had their own impressions of what they had just seen: the successful detonation of the world's first atomic bomb.

Physicist Edwin McMillan's said, “I am sure that all who witnessed this test went away with a profound feeling that they had seen one of the great events of history.”

Here's what some of the others said:

- We “were struck by an even stronger feeling that the faith of those who had been responsible for the initiation and the carrying on of this Herculean project had been justified.” – Gen. Leslie Groves, leader of the Manhattan Project
- “We knew the world would not be the same. A few people laughed, a few people cried, most people were silent.” – Director J. Robert Oppenheimer
- “Our first feeling was one of elation, then we realized we were tired, and then we were worried.” – physicist Victor Weisskopf
- “Some people claim to have wondered at the time about the future of mankind. I didn't. We were at war, and the damned thing worked.” – physicist Norris Bradbury
- “The whole country was lighted by a searing light with the intensity many times that of the midday sun. It was golden, purple, violet, gray, and blue. It lighted every peak, crevasse, and ridge of the nearby mountain range with a clarity and beauty that cannot be described but must be seen to be imagined.” — Brig. Gen. Thomas Farrell, deputy to Gen. Leslie Groves
- “Oppie, you owe me \$10.” – George Kistiakowsky, physical chemist, who wagered a month of his salary against Oppenheimer's \$10 that the Gadget would work.

- “We looked to the place where the bomb had been; there was an enormous ball of fire which grew and grew and it rolled as it grew; it went up into the air, in yellow flashes and into scarlet and green. It looked menacing.” – physicist Isidor Rabi
- “The whole spectacle was so tremendous—and one might almost say fantastic—that the immediate reaction of the watchers was one of awe rather than excitement.” — physicist Edwin McMillan
- “You could see it on their faces. I saw that something very grave and strong had happened to their whole outlook on the future.” – scientist Stan Ulam
- “No one who saw it could forget it, a foul and awesome display.” – Trinity Test Director Kenneth Bainbridge
- “The spectacle was tremendous, beautiful, magnificent, terrifying, exciting, humbling, scary.” – Marjorie Bradner, secretary at the Los Alamos site
- “We saw the whole sky flash with unbelievable brightness in spite of the very dark glasses we wore.” – physicist Emilio Segre
- “I am about the only guy who actually looked at the damn thing.” – Richard Feynman, physicist, who witnessed the Trinity test without wearing the safety glasses he was given
- “The thing that got me was not the flash but the blinding heat of a bright day on your face in the cold desert morning.” – physicist Phillip Morrison, who was from 10 miles away at base camp
- “Although I had lived through this moment in my imagination many times during the past few years and everything happened almost as I had pictured it, the reality was shattering.” – James Chadwick, head of the British delegation to the Manhattan Project in Los Alamos



“We knew the world would not be the same,” said J. Robert Oppenheimer, Los Alamos Lab Director, after witnessing the successful detonation of the Gadget during the Trinity Test on July 16, 1945.



Director J. Robert Oppenheimer (left) and Gen. Leslie Groves inspect the Trinity Test site after the Gadget’s successful detonation on July 16, 1945.

Sidebar:

Did you know?

Even its name – Trinity – is associated with its own famous prose. Years after the test took place on July 16, 1945, Gen. Leslie Groves, the leader of the Manhattan Project, wrote to former Los Alamos Lab Director J. Robert Oppenheimer.

In his letter from 1962, Groves asked Oppenheimer the meaning behind the moniker.

Oppenheimer replied, “Why I chose the name is not clear, but I know what thoughts were in my mind,” he said, citing the poetry of John Donne and the line, “Batter my heart, three person'd God.”

Batter my heart, three-person'd God; for you
As yet but knock; breathe, shine, and seek to mend;
That I may rise, and stand, o'erthrow me, and bend
Your force, to break, blow, burn, and make me new.
Yet dearly I love you, and would be loved fain,
But am betroth'd unto your enemy;
Divorce me, untie, or break that knot again,
Take me to you, imprison me, for I,
Except you enthrall me, never shall be free,
Nor ever chaste, except you ravish me.



Box:

For more stories, videos, and original, printable artwork commemorating the 75th anniversary of the Trinity Test, visit lanl.gov/trinity.